

CLAIMS

What is claimed is:

1. A method to urgently receive data via facsimile, comprising:
 - determining whether an urgent transmission of data is demanded by a second party previously determined to be capable of urgently receiving the data during communication with a first party; and
 - interrupting communication with the first party and receiving the urgent data from the second party upon determining that the urgent transmission of data is required from the second party during communication with the first party.
2. The method according to claim 1, wherein the determination of whether an urgent transmission of data is demanded by the second party comprises:
 - determining whether an access request signal is received from the second party during communication with the first party;
 - determining whether an urgent receipt function is enabled upon determining that the access request signal is received from the second party;
 - storing a phone number of the second party upon determining that the urgent receiving function is enabled;
 - determining whether the phone number of the second party is among urgent phone numbers from which the user allows urgent receipt of data; and
 - interrupting communication held with the first party and receiving the urgent data from the second party, upon determining that urgent transmission of data is requested from the second party and the phone number of the second party is among the urgent numbers.
3. The method according to claim 2, wherein the determination of whether an urgent transmission of data is demanded by the second party further comprises:
 - determining whether an urgent receipt enable condition predetermined by the user is satisfied upon determining that the urgent receiving function is enabled, and
 - wherein, if the urgent receipt enable condition is satisfied, the phone number of the second party is stored.
4. The method according to claim 3, further comprising:

determining whether the user requires to set at least one among urgent phone number and the urgent receipt enable condition;

receiving at least one set by the user among the urgent phone number and the urgent receipt enable condition upon determining that the user requires to set at least one urgent phone number and the urgent receipt enable condition; and

storing at least one among the set urgent phone number and the set urgent receipt enable condition, and re-determining whether an urgent transmission of data is demanded by the second party during communication with the first party.

5. The method according to claim 3, further comprising:

determining whether the user requires update of at least one urgent phone number and the urgent receipt enable condition;

receiving at least one which the user sets to update among the urgent phone numbers and the urgent receipt enable condition upon determining that the user requires update of at least one among the urgent phone number and the urgent receipt enable condition; and

updating at least one among a previous urgent phone number and a previous urgent receipt enable condition into at least one among the set urgent phone number and the set urgent receipt enable condition, storing the update result, and re-determining whether an urgent transmission of data is demanded by the second party during communication with the first party.

6. The method according to claim 3, wherein the urgent receipt enable condition is a condition where the second party requires the urgent transmission of data while data is being transmitted to the first party.

7. The method according to claim 3, wherein the urgent receipt enable condition is a condition where the second party requires the urgent transmission of data while data is being received from the first party.

8. The method according to claim 3, wherein the urgent receipt enable condition is a condition where the second party requires the urgent transmission of data while data is being received or transmitted from or to the first party.

9. The method according to claim 6, wherein the data to be transmitted to the first party is prestored data.

10. The method according to claim 1, further comprising:

determining whether all of the data transmitted from the second party is received after the communication with the first party has been interrupted to receive the data from the second party; and

restarting communication with the first party upon determining that all data from the second party has been received.

11. The method according to claim 10, wherein the restarting communication with the first party upon determining that all data from the second party has been received comprises: retransmission of the data to the first party; and receiving data retransmitted from the first party.

12. The method according to claim 10, wherein the restarting communication with the first party upon determining that all data from the second party has been received comprises: reading data stored when communication with the first party is interrupted; and retransmitting the read data to the first party.

13. The method according to claim 1, wherein communication with the first party is a telephone call.

14. An apparatus to urgently receive data provided to a facsimile machine, the apparatus comprising:

a communication request detector to check whether during communication with a first party an urgent transmission of data is required from a second party previously determined to be capable of urgently receiving the data and to output the checked result as a first control signal; and

a data communication controller to interrupt communication with the first party in response to the first control signal and to receive the data from the second party.

15. The apparatus according to claim 14, wherein the communication request detector comprises:

- a signal detector to detect an access request signal from the second party when communication with the first party is in progress, and to output the detected result as a second control signal;

- an enable detector to check whether an urgent receiving function is enabled in response to the second control signal, and to output the checked result as a third control signal;

- a first memory to store a phone number of the second party in response to the third control signal; and

- a number comparator to check whether the phone number from the first memory is an urgent phone number predetermined by a user, and to output the checked result as the first control signal.

16. The apparatus according to claim 15, wherein the communication request detector further comprises:

- a condition detector to check whether an urgent receipt enable condition predetermined by the user is satisfied in response to the third control signal, and to output the checked result as a fourth control signal, wherein the first memory stores the phone number of the second party in response to the fourth control signal.

17. The apparatus according to claim 15, further comprising:

- a set request detector to check whether the user requires to set at least one urgent phone number and the urgent receipt enable condition, and to output the checked result as a fifth control signal; and

- a phone number and condition setting unit to receive the at least one set urgent phone number and the urgent receipt enable condition in response to the fifth control signal, wherein the urgent receipt enable condition is predetermined by the user and the first memory stores at least one of the set urgent phone numbers and the set urgent receipt enable condition input from the phone number and condition setting unit.

18. The apparatus according to claim 15, further comprising:

an update request detector to check whether the user requires to update at least one urgent phone number and the urgent receipt enable condition, and to output the checked result as a sixth control signal; and

a phone number and condition setting unit to receive at least one updated among the urgent phone numbers and the urgent receipt enable condition in response to the sixth control signal, wherein the urgent receipt enable condition is predetermined by the user and the first memory updates a previous urgent phone number into the set urgent phone number and a previous urgent receipt enable condition into the set urgent receipt enable condition, and stores the update result.

19. The apparatus according to claim 17, wherein the phone number and condition setting unit comprises:

a key manipulator to allow manipulation by the user to generate at least one of the urgent telephone number and the urgent receipt enable condition, and to output at least one generated urgent telephone number and urgent receipt enable condition in response to the fifth or sixth control signal.

20. The apparatus according to claim 17, wherein the phone number and condition setting unit comprises:

a second memory to store a phone number list;
a display to read the phone number list from the second memory and to display the read phone number list to the user; and
a phone number selection unit to determine as an urgent phone number a phone number selected from the displayed phone number list by the user, and to output the determined urgent phone number in response to the fifth or sixth control signal.

21. The apparatus according to claim 16, wherein the condition detector checks whether the urgent receipt enable condition is satisfied in response to the third control signal, where the urgent receipt enable condition is a case where the second party demands an urgent transmission of data while data is being transmitted to and/or received from the first party.

22. The apparatus according to claim 21, wherein the data communication controller comprises, a third memory which stores the data being transmitted to the first party, in response to the first control signal.

23. The apparatus according to claim 14, further comprising:
a transmission completion detector to check whether the data communication controller has received all of the data transmitted from the second party, and to output the checked result as a seventh control signal; and
a communication restart unit to restart the communication with the first party in response to the seventh control signal.

24. The apparatus according to claim 25, wherein the communication restart unit comprises:

a data request unit to generate a data transmission request signal to require data retransmission to the first party in response to the seventh control signal; and
a data receiving unit to receive data retransmitted from the first party.

25. The apparatus according to claim 25, wherein the communication restart unit comprises a data transmission unit that reads data stored when communication with the first party is interrupted in response to the seventh control signal, and retransmits the read data to the first party.

26. The apparatus according to claim 14, wherein communication with the first party is a telephone call.

27. The method according to claim 1, wherein the determination of whether an urgent transmission of data is demanded by the predetermined second party is performed while data is received from and transmitted to the first party.

28. The method according to claim 1, wherein the determination of whether an urgent transmission of data is demanded by the second party further comprises:
determining whether data transmitted from the second party should be urgently received.

29. The apparatus according to claim 15, further comprising:

an enable button to allow a user in communication with the first party to enable the urgent receiving function in response to the second control signal, and to output the third control signal to indicate that the urgent receiving function is enabled.

30. The method according to claim 1, wherein the interruption occurs when a facsimile transmission of data is being established to the first party.

31. A method to urgently receive data via facsimile, comprising:

storing at least one phone number which a user determines to be urgent;

determining whether an access signal requiring urgent transmission of data via facsimile is requested;

comparing the at least one phone number stored with a phone number via which the access signal requesting transmission of data is requested; and

interrupting an on-going communication to receive the facsimile data requiring urgent transmission.

32. A method to urgently receive data via facsimile, comprising:

checking whether an urgent transmission of data is required from a second party during communication with a first party;

outputting the checked result as a first control signal; and

interrupting communication with the first party in response to the first control signal to receive the data from the second party.

33. The method according to claim 32, further comprising:

determining whether the phone number of the second party is a predetermined urgent phone number.